

Amendment After Final Rejection  
Serial No. 09/954,657

Docket No. DE000148

REMARKS

Entry of this amendment and reconsideration are respectfully requested in view of the amendments made to the claims and for the remarks made herein.

Claims 1-12 are pending and stand rejected.

Claims 1, 3, 5-7, 8 and 11 stand rejected under 35 USC 102(e) as being anticipated by Junqua (USP no. 6,415,257).

Claims 1, 7 and 8 have been amended to state that "the style of speech is determined based on factors selected from the group consisting of: the number of polite phrases used, address used, speech level, information density, vocabulary and use of foreign words, number of different words and classification of words of speech inputs with respect to rare occurrence." No new matter has been added.

Support for the amendment may be found on page 3, lines 24-31, which state in part, "[w]hen the style of speech of a user input is determined, for example, evaluations with respect to the following characterizing features are made: number of polite phrases used, address used (you), speech level ..., information density ..., vocabulary and use of foreign words, number of different words and classification of words of speech inputs with respect to rare occurrence."

Junqua, as read by applicant, recites a system for identifying and adapting a TV-user profile by means of speech technology that controls interaction with television using speech, whereby each user of the system may have a set of determined preferences that are automatically selected through identification/verification of the speaker's voice. (see col. 1, lines 8-11). Junqua more specifically teaches a system wherein a "number 'T' of training speakers provide a corpus of training data upon which the eigenspace will be constructed." (see col. 8, lines 12-13). The "training data are then used to train a speaker dependent model ... One model per speaker is constructed ... with each model representing the entire inventory of sound units that is to be understood by the recognition system." (see col. 8, lines 16-20). "After all training data from T speakers have been used to train the respective speaker dependent model, a set of T supervectors is constructed." (see col. 8, lines 39-43). Junqua further teaches that "[f]or speaker identification, the new user data is assigned to the closest training speaker in eigenspace ... The system will thus identify the new speech as being that of the prior training speaker

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whose data point or data distribution lies closest to the new speck in eigenspace." (see col. 9, line 65 – col. 10, line 3). "Once the eigenvoice space has been constructed, speaker normalization, speaker adaptation or environment adaptation can be readily accomplished... The speaker dependent mode can be trained in either a supervised mode, where the training system speech recognition system uses a speaker independent mode to determine the content of the adaptation speech." (see col. 10, lines 28-42).

Hence, Junqua discusses developing a plurality of speech models of a plurality of training users. Junqua fails to disclose the construction of the speech models but based on conventional technology and that the construction is based on the content and speech characteristics of the T trainers. The speech model that is the closest match in the eigenspace to a user's speech data (i.e., content and speech characteristics) is selected and adapted for subsequent recognition processing. Junqua fails to disclose "deriving user models from determined details about the style of speech of user inputs and/or details about interactions in dialogs between users and the dialog system (1), wherein the style of speech is determined based on factors selected from the group consisting of: the number of polite phrases used, address used, speech level, information density, vocabulary and use of foreign words, number of different words and classification of words of speech inputs with respect to rare occurrence," as is recited in the claims.

It is well recognized that to constitute a rejection pursuant to 35 USC §102, i.e., anticipation, all material elements recited in a claim must be found in one unit of prior art.

Junqua cannot be said to anticipate the invention recited in independent claim 1 because Junqua fails to disclose material element claimed. More specifically, Junqua fails to disclose the element "deriving user model from determined details about style of speech, wherein the style of speech is determined based on factors selected from the group consisting of: the number of polite phrases used, address used, speech level, information density, vocabulary and use of foreign words, number of different words and classification of words of speech inputs with respect to rare occurrence," as is recited in the claim.

Having shown that Junqua fails to disclose a material element claimed, applicant submits that the reason for the rejection has been overcome and can no longer be

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sustained. Applicant respectfully requests withdrawal of the rejection and allowance of the claim.

With regard to independent claims 7 and 8, these claims were rejected for the same reason used in rejecting claim 1 and have been amended in a manner similar to that of claim 1. Hence, for the amendments made to these claims and for the remarks made with regard to claim 1, which are applicable and reasserted, as if in full, in response to the rejection of claims 7 and 8, applicant submits that claims 7 and 8 include subject matter not disclosed by Junqua and, thus, are patentably distinguishable from, and allowable over, the apparatus disclosed by Junqua. Accordingly, applicant respectfully requests withdrawal of the rejection and allowance of claims 7 and 8.

With regard to the remaining claims, these claims depend from the independent claims, which have been shown to be allowable over the cited reference. Accordingly, these claims are also allowable by virtue of their dependency upon an allowable base claim.

Claims 2 and 4 are rejected under 35 USC 103(a) as being unpatentable over Junqua in view of Larsen (IEEE Publication).

Applicant respectfully disagrees with, and explicitly traverses, the reason for rejecting the claims.

A claimed invention is *prima facie* obvious when three basic criteria are met. First, there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings therein. Second, there must be a reasonable expectation of success. And, third, the prior art reference or combined references must teach or suggest all the claim limitations.

Claims 2, 4, 9 and 10 depend from the independent claims which, as shown above, are allowable over the Junqua reference as this reference fails to teach or suggest deriving a user model from the style of speech based on the criterion specified.

Larsen teaches an experiment for determining a dialogue management strategy wherein an inexperienced user may prefer to use a direct system and an experienced user may prefer to use a shorter system. Larsen further teaches that "the user must be able to use unconstrained natural speech [and] this often calls for an elaborate model. ...

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However, when addressing well structured tasks as the present one, this might be avoided and a much simpler model can be employed." (see page 68, lines 1-5). Hence, rather than teaching deriving models from the style of speech, Larsen avoids this complexity completely and uses a model that is simpler because of the fixed inputs used in the experiment. Hence, Larsen fails to teach, and even teaches away from, using the style of speech to derive the user models as claimed.

Junqua and Larsen, individually and in combination, fail to teach or suggest material elements claimed in the independent claims, thus the invention, as recited in dependent claims 2, 4, 9 and 10 is not rendered obvious by the cited references because the combination of the teachings of Junqua and Larsen does not include all the elements claimed.

For the above remarks, applicant respectfully requests withdrawal of the rejection and allowance of these claims.

Although the last Office Action was made final, this amendment should be entered. No matter has been added to the claims that would require comparison with the prior art or any further review. Accordingly, pursuant to MPEP 714.13, applicant's amendments should only require a cursory review by the examiner. The amendment therefore should be entered without requiring a showing under 37 CFR 1.116(b).

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

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Date: November 8, 2005

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